

REMARKS

Claims 13-19 stand rejected under 35 USC 103 over Stevens et al. in view of Urwin and view of Holley, Jr.

The independent claim 13 requires first and second potentiometers coupled with a common potentiometer shaft that is coupled to an operating shaft that turns in accordance with movement of the swing door. Stevens et al. discloses first and second potentiometers 108, 130 but does not disclose that the potentiometers are on a common shaft. Specifically, the potentiometers 108, 130 permit independent determination of the motion of the door and the motion of the motor that drives the door. Column 3, lines 44-50. Stevens et al. further discloses that the relationship between the drive dog 142 and drive pin 146 permits the door to be operated manually without causing rotation of the motor 212. Column 4, lines 51-53. Thus, in the event of manual operation of the door, the potentiometer 108 detects motion, whereas the potentiometer 130 does not detect motion. Clearly, therefore, since Stevens et al. discloses that the purpose of providing the two potentiometers is to permit independent determination of the motion of the door and the motion of the motor respectively, and further discloses that the door may be operated without causing rotation of the motor, it would not have been obvious to a person of ordinary skill in the art to have provided the two potentiometers 108, 130 on a common shaft.

The examiner points out that Urwin discloses two potentiometers on a common shaft. Urwin relates to a control device for a radio or television receiver. The control device includes two potentiometers having respective rotors 30, 31 mounted on respective sleeves 14, 16, each rotatable about a shaft 18. A spring 54 urges a first pin 20, to the right of FIG. 1, into engagement with the sleeve 16, whereas using a knob (not shown) attached to the shaft to push the shaft 18 to the left results in the pin 19 engaging the first sleeve 14. In this manner, by either pushing and turning the shaft 18 or by simply turning the shaft, either the first potentiometer rotor 30 or the second potentiometer rotor 31 is rotated about the central axis of the shaft 18.

Although Urwin discloses two potentiometers on a common shaft, it would not have been obvious to a person of ordinary skill in the art to apply the disclosure of Urwin to the door operating system of Stevens et al. First, the dual control mechanism relates to a completely different field from Stevens et al, such that a person of ordinary skill could not be expected to look to the disclosure of Urwin unless instructed (e.g. by applicant's disclosure) to seek control mechanisms including multiple potentiometers on a common shaft.

Second, use of two potentiometers on a common shaft would not meet the goal of Stevens et al. of being able to determine independently motion of the door and motion of the motor, without providing some mechanism to allow motion from two independently moveable objects to be transmitted to the two rotors 30, 31 respectively, thereby adding complexity to the door operating system.

Third, viewing the drawings of Urwin, the supposed motivation for mounting two potentiometers on a common shaft (reducing the number of moving parts), appears speculative at best.

The examiner relies on Holley, Jr. as disclosing two potentiometers having characteristic curves that are shifted in phase with respect to each other. However, the examiner has not suggested that the characteristic curves of the two potentiometers shown by Holley Jr. are substantially identical, as required by claim 13. The examiner has further acknowledged that Stevens et al. does not mention the characteristic curves, and has not suggested that Urwin mentions the characteristic curves of the potentiometers. Thus, the record does not contain any disclosure or suggestion that the two potentiometers of Stevens et al., even as modified by Urwin and Holley, Jr., should have substantially identical characteristic curves.

In view of the foregoing, applicant submits that the subject matter defined in claim 13 is not disclosed or suggested by Stevens et al, Urwin, and Holley, Jr., whether taken singly or in combination. Therefore, claim 13 is patentable and it follows that the dependent claims 14-19 also are patentable.

Respectfully submitted,

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